NOTE:
1. Answer question 1 and any FOUR from questions 2 to 7.
2. Parts of the same question should be answered together and in the same sequence.

Time: 3 Hours Total Marks: 100

1. a) Define the term project. Also list characteristics that distinguish a project from routine tasks.
b) Define functional requirements of a project. Who decides such requirements?
c) What are the performance measures and predictive measures?
d) What is activity network? For what purpose is it used? Explain in brief.
e) List categories of resources for project development with one line description of each.
f) Explain in brief an organization structure called ‘chief programmer team’.
g) What is a quality standard? What role does it play? Give an example of software quality standard.

(7x4)

2. a) List and explain the three feasibility tests in brief.
b) Explain in brief the software development cycle by giving its diagram.
c) What do you mean by Work Breakdown Structure (WBS) in context to software project and product? Discuss with examples.

(6+8+4)

3. a) Explain how effort estimation can be done with the help of parameters such as software size.
b) List in brief the activities in project planning. Explain each activity in brief.
c) Describe the function point analysis. How function points are used in estimation of cost and efforts using decomposition technique.

(6+8+4)

4. a) Explain the forward pass phase while scheduling activities related to the project with the help of network diagram.
b) Explain COCOMO model for project cost estimation with a suitable example.
c) As size is the main factor determining the cost of a project, an accurate size can be used to estimate the cost and schedule of the software project. Give your view in favour and in against of the statement.

(6+8+4)

5. a) Explain how risks in project development can be managed. Also provide risk engineering task breakdown.
b) What is earned value analysis? Explain in detail.
c) Is the critical path important if only one person is working on a software project? Discuss the concept of PERT/CPM in defining an optimal schedule.

(8+6+4)
6.
   a) Explain fixed price contacts with its advantages and disadvantages in brief.
   b) What is importance of group decision making in project management? What are the obstacles for such group decision making?
   c) Write a short note on SEI Capability Maturity Model (CMM). How does it differ from ISO9000? (6+6+6)

7.
   a) Identify and discuss major risks that could affect the software development process and suggest names of proper risk management techniques.
   b) Discuss in brief quality of a developed project by considering
      i) product operation qualities
      ii) product revision qualities
      iii) product transition qualities (9+9)